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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,960	03/25/2004	David J. Edlund	NPW 357	9804
23581	7590	07/13/2006		
KOLISCH HARTWELL, P.C. 200 PACIFIC BUILDING 520 SW YAMHILL STREET PORTLAND, OR 97204			EXAMINER DOVE, TRACY MAE	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 07/13/2006

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/810,960  
Filing Date: March 25, 2004  
Appellant(s): EDLUND ET AL.

**MAILED**

**JUL 13 2006**

**GROUP 1700**

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 4/27/06 appealing from the Office action mailed 6/9/05.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

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**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,045,933	OKAMOTO	4-2000
6,627,338	ST-PIERRE	9-2003
2001/0026884	APPLEBY	10-2001
4,509,915	ITO	4-1985

Blomen, Leo J.M.J, Mugerwa, M, eds. Fuel Cell Systems. Plenum Press, New York. 1993.  
232.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

See the Final Rejection of 6/9/05 for the grounds of rejection applicable to the appealed claims.

**(10) Response to Argument**

I. A. Applicant argues the Examiner's proposed modification of Okamoto in view of St.-Pierre would create an inoperable device. It is unclear how Applicant reaches this conclusion when comparing the claimed invention to the prior art of record. Applicant argues Okamoto teaches a "blower 46 for introducing atmospheric air" and states this construction is an energy-efficient design in which the fuel cell is supplied with atmospheric air obtained from proximate the fuel cell system. This is in accordance with the background teaching of St.-Pierre which is relied upon by the Examiner to reject at least claims 1 and 27. St-Pierre teaches "oxygen is typically obtained from the air surrounding the fuel cell system" (2:51-54). Applicant then argues St-Pierre is directed to integrated fuel cell and pressure swing adsorption systems. However, this argument is moot because the Examiner does not rely on substituting a pressure swing adsorption system of St-Pierre into the fuel cell system of Okamoto. The Examiner relies on the background section of St-Pierre which teaches a separation membrane as a commonly known oxygen enrichment device (2:51-66). St-Pierre also teaches pressure swing adsorption systems, but the Examiner does not suggest modifying Okamoto with the pressure swing adsorption system taught by St-Pierre. The argument made by Applicant that the "bulk" of St-Pierre is directed toward a pressure swing adsorption system is not relevant to the rejection of record because St-Pierre clearly teaches a separation membrane is a commonly known oxygen enrichment device.

Applicant refers to the specification disclosure that utilization of an oxygen-selective membrane to increase the oxygen content of oxidant air is a "pressure-driven separation process" that occurs "at a pressure greater than atmospheric pressure, such as a pressure of at least 2

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bara”. However, the argument is not persuasive because the claimed invention does not require a “pressure-driven separation process”. The claims do not recite any limitations regarding pressure. Thus, Applicant’s argument that the modification to Okamoto to include the separation membrane of St-Pierre results in an inoperable device is not commensurate in scope with the claimed invention.

Applicant argues the air supply mechanism of Okamoto is strictly limited to being a blower of atmospheric air. However, In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues the combination of Okamoto and St-Pierre does not achieve the at least 2 bara pressure required for the pressure-driven separation process used in conjunction with an oxygen-selective membrane. Again, the claims do not require a pressure driven separation process. If Applicant’s argument is that one of skill would have known that the claimed separation membrane would necessarily require a pressure-driven process, then one of skill would have known that the separation membrane taught by St-Pierre would inherently require a pressure-driven process. In any event the claims do not contain any limitations with regards to pressure. Again, the claims do not recite “an elevated pressure”.

**B.** Applicant relies on the arguments presented under subsection “A”, thus there is nothing further for the Examiner to rebut.

**C.** Applicant asserts dependent claims 2, 7-10, 20, 28, 29, 31, 33-35, 44 and 47 were not addressed in the Examiner’s final Office Action. Applicant assertion is incorrect. The Final

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Office Action of 6/9/05 clearly address all claim limitations. For example, claim 2 requires the at least one feed stream to further comprise water. Page 2 of the final rejection recites “adapted to produce hydrogen gas from at least one feed stream comprising a carbon-containing feedstock (methanol) and *water*”. Claim 7 requires steam reforming and page 2 of the final rejection recites “including a steam reformer”. Claim 8 recites “further comprising at least one separation region adapted to selectively reduce to concentration of impurities present in the product hydrogen stream. Page 2 of the final rejection recites “a hydrogen gas supply means, such as a hydrogen selective membrane or a pressure swing adsorption device (PSA), to remove components of the reformat such as unreformed methanol, carbon dioxide, nitrogen, water, etc.”. Claim 9 require oxygen-enrichment by removal of nitrogen. Page 3 of the final rejection recites “Oxygen...may be enriched by separating out components” such as “nitrogen”. Claims 10, 20, 28, 29, 31, 33-35, 44 and 47 all also addressed by the final rejection.

**D.** Applicant relies on the arguments presented under subsection “A”, thus there in nothing further for the Examiner to rebut.

**E.** Applicant relies on the arguments presented under subsection “A”, thus there in nothing further for the Examiner to rebut.

**II. A.** Applicant relies on the arguments presented under subsection “A” with regards to Okamoto and St-Pierre, thus there in nothing further for the Examiner to rebut regarding these two references. Applicant asserts Ito “simply does not disclose pressuring a supply to fuel with the oxygen-depleted stream to form an oxygen-enrichment assembly”. However, this is merely an unsupported assertion. Applicant provides no reasoning to evidence to support the assertion. Applicant has not addressed to Examiner motivation for combining the references.

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B. Applicant relies on the arguments presented under subsection "A", thus there is nothing further for the Examiner to rebut.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

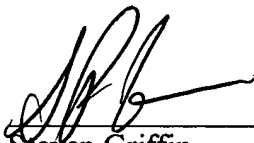


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July 10, 2006